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Section 3, Remarks and Response to Rejection:**REMARKS**

Reexamination and reconsideration of this case is respectfully requested in view of the amendments to the claims and the following remarks. Claims 1 – 11 remain in this case. Only Claims 1 and 10 have been amended to more clearly point out and distinctly claim the invention.

Claim 1 has been amended to identify the connective position of the inventive interface circuit as being between a current source or resistive-type sensor, and a microprocessor airbag safety system controller. In addition, the second element it has been corrected to recite that it is a sensor circuit and comprises a current source or resistive-type sensor, and that it has a single lead interface to the current mirror circuit (first element of the claim). A new part five has been added to the claim to more clearly and expressly specify the functional interactions of the interface with both types sensors (in a single circuit, unlike the three distinctly different circuits of Darmawaskita), that it operates with low input voltage, permits use of an entire dynamic range of microprocessor analog inputs and, as a single interface circuit, has the capacity to interface with multiple sensors.

Claim 10, one of two main method claims, has been amended to more clearly point out and distinctly claim the method as one of monitoring sensors, rather than the latches themselves. Of course, indirectly it is monitoring the latches, seat, belt tensioners, but it is more accurate to describe the method as monitoring the sensors. The method step 1 has been amended to more clearly recite that the circuit is provided between the sensor and a microprocessor airbag safety system controller, and the last step as controlling the activation as depending on the status of the sensors.

Support for the amendatory language of Claims 1 and 10 is found at page 6, lines 11 – 15, page 8, lines 18 – 24, and as to the tensioner, at page 9, line 22 (by way of example). Accordingly, no new matter has been introduced by the amendments to these two claims, as the amendments more clearly point out and describe the inventive combination and method, making it clear that the references do not teach or suggest the invention as claimed.

The Schondorf and Darmawaskita References Do Not Render the Claims Obvious:

The Office Action rejects all the claims 1 – 11 in the case as obvious variations of the combination of Schondorf 6,581,960 in view of Darmawaskita 5,854,564. It is Applicant's view that the rejection should be withdrawn on the following grounds:

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1. Because the references taken singly or together do not teach or suggest the claimed invention;
2. Because the only way one of ordinary skill in the art would combine the references would be to insert Darmawaskita's Fig. 3 circuit in place of the C to V Converter and/or the impedance voltage follower (both numbered 56 in Fig. 5 of Schondorf), but that is not the claimed invention (nor is it clear whether which of the three substitutions would work); and
3. Contrary to case law, it improperly relies on Applicant's specification for the motivational teaching to combine the references contrary to their plain teachings.

Applicant addresses these points in order below, including responding to each of the rejections on pages 2 – 7 of the Detailed Office Action:

As to point # 1, the Office Action significantly mischaracterizes the Schondorf invention and the teachings of the patent. It is directed to determining the presence or absence of a passenger in an auto seat through capacitance or inductance by means of a plurality of wires 28 embedded for a defined length in the seat belt 26, both the lap portion 40 and the shoulder portion 42. That is not a teaching of a latch sensor to determine if the seat belt is latched or not as an input to an airbag control system to deploy or not an airbag associated with the particular seat. The Office Action fails to acknowledge that Schondorf is directed to a completely different problem and a different solution. Indeed, the Schondorf mention of a "Buckle Sensor 38" is that it is "optional", Col 3, line 14 of Schondorf. Fig. 5 of Schondorf shows a direct, single line connection to the microprocessor 44, and absolutely zero disclosure of the circuitry in it.

Further, on page 2 of the Detailed Action, in reference to main claim 1 and when talking about a seat belt sensor, the Office Action candidly admits that Schondorf fails to disclose any interface for the seatbelt sensor and a current mirror circuit having first and second current paths. It must also admit that Schondorf cannot teach or suggest in which current path the current sensing circuit is to be located, or the nature of the mirroring, since none exist. It also admits that Schondorf does not teach or suggest a control microprocessor circuit. Nor does Schondorf teach to what current the non-existent control circuit is to be responsive nor to control what function.

Contrary to the statements on pages 2 and 3 of the Office Action, sensor in Darmaskita's

Fig. 3 is capacitor 38, not the resistor 36 (Col 5, lines 5 – 26), so the Office is considering the wrong leg of the circuit. In addition the capacitor sensor 38 is in parallel to capacitor 14 so that the constant current charges both capacitors and the voltage of both ramps. These errors illustrate a technical misunderstanding of the operation of the Darmawaskita reference and how different it is than the claimed circuit.

On page 4 of the Detailed Action in reference to Claim 4, the Office admits that the combination of references do not disclose the safety interface circuit includes a first current sense resistor in the first defined path or that the voltage across the resistor is proportional to current through said latch sensor circuit and provides a signal to the control microprocessor circuit. To gloss over that the Office Takes “official notice” of non-linear capacitor charging current, linear resistor functions, and inherent capacitor circuit delay but no resistor delay. This “official notice” amounts to improper phantom prior art, and does not provide a legitimate basis for combining the references. Applicant includes a case-law discussion below that rebuts the Office position.

On page 5 of the Detailed Action in reference to Claim 5 the office admits that the combination of references do not disclose wherein the control microprocessor circuit includes outputs to control the operation of a vehicle airbag system or seatbelt tensioner system. Here however, the Office does not even bother to rely on phantom prior art. Rather the Office Action ignores the holes in the references and pulls out of thin air an imaginary “motivation would be” to combine the references and provide the missing circuits.

As noted in detailed discussion of case law below, the source of the motivation to combine references cannot come from mid-air or Applicant’s own specification. It must come from the references, and the Office is invited to point to specific column and line in both references for the motivation. Where in Schondorf does he invite one of ordinary skill in the art to look to which circuit in Darmawaskita, and where in Darmawaskita does he point to his circuit as solving a problem in Schondorf. Keep in mind that Schondorf’s problem is “presence sensing”, sensing the presence or absence of a passenger in a seat, and he has no problem in his proposed C/V and impedance voltage follower interfaces. (As Applicant shows below, the only combination that might be said to be suggested does not result in Applicant’s claimed invention. Indeed, the only combination of the references points the other way.)

On page 6 of the Detailed Action in reference to claims 6 and 7, the Office admits that

the combination of references fails to disclose or teach a second control transistor for the second latch circuit in response to a signal from the control microprocessor circuit, glossing over this by again taking "official notice" that this is a "mere" duplication of existing circuits (which are earlier admitted by the Office to not be shown in the references). Again this is phantom prior art; "whatever your circuit is, a duplication is obvious, even if the references do not disclose or teach the circuit, and without regard for the interconnections or the functionality claimed." That position is unsound and should be withdrawn.

Further, on page 6 of the Detailed Action in reference to Claim 8, the Office admits that **the combination of references do not disclose** wherein the current through said first current path is detected by said microprocessor circuit in discrete values, said discrete values indicating that neither seatbelt is latched, only said first seatbelt is latched, only a second seatbelt is latched, or that both seatbelts are latched. Again, the Office relies on the handy phantom prior art of "official notice" (oops, I didn't find that in our search) of path current interdependency, and change in current for sensors in parallel (which type of sensors? Capacitive, resistive, inductive, or current source sensors?). In rebuttal, it is respectfully suggested that the Office review the Darmawaskita reference, which teaches that the "official notice" is overbroadly mistaken in its generalization, as he discloses the need for three (3) distinctly different circuits, one for each of the three main types that he identifies in Col 1, lines 15 - 45.

Thus, Schondorf obviously misses over half the claimed invention. That is natural, as Schondorf is not directed to the same problem as the instant invention. Schondorf was selected as the main reference simply because it deals with seat belts in automobiles. However the Schondorf focus is on the capacitive/inductive sensors embedded in the lap and shoulder belts; the reference to seat belt sensor is incidental; note Schondorf states that the seat belt sensor 38 is "optional", see Col 3, lines 14 - 15. Clearly, the Office improperly glosses over the real differences between Schondorf and the claimed invention.

What the Office Action then proceeds to do is to rely on Darmawaskita for the teaching of a current mirroring circuit for a microcontroller to interface with sensors. It is as if the Office went to a catalog for current mirrors and picked one, then makes the bald assertion that the combination claimed would be obvious. The Office Action makes the **unsupported** assertion that it would have been obvious to combine the two references in the particular way as to render the claimed invention obvious; more on why that is an unsupported and inappropriate assertion

below.

As to point #2, in fact what the Office has done is to find one version of a direct sensor interface module using one arrangement of a current mirror circuit, and attempts to insert that in line between a seat belt sensor and microprocessor in the other reference.

However, the only combination would be to use the Darmawaskita Fig. 3 circuit (which is not Applicant's circuit) in place of the C to V Converter and/or the impedance voltage follower (both numbered 56) in Schondorf. It is significant that the Office Action fails to show what elements in the Schondorf circuit would be eliminated, with what loss of function, and replaced with what parts of the Darmawaskita sensor interface module.

Indeed, a fair reading of the references show that there is no direction to combine them in the novel and non-obvious manner taught by the Applicant to achieve the inventive device claimed: a universal automotive passenger seat safety circuit with significant safety features.

Even if one skilled in the art, upon consideration of the references, were to combine them, the result would not be the claimed invention. Rather, Schondorf might try to use the Darmawaskita sensor interface circuit to interface with the wires in the seat belt. That is, the only Schondorf/Darmawaskita combination that makes sense is to substitute the capacitive-type interface of Darmawaskita for the c to V converter and/or impedance voltage follower 56 in Fig 5 of Schondorf.

Here's why:

Schondorf discloses an occupancy presence (and size of the occupant) sensor system using the "capacitance or inductance" of wires embedded in the seat belt and/or shoulder belt (Abstract, Col 3, lines 43-48).

Darmawaskita at Col 3, lines 20 – 22 that his interface circuit variation for "capacitive sensors" is for capacitive sensors used as "presence detectors".

Therefore, the combination would be to use the Darmawaskita Fig. 3 circuit (see the capacitors 38 and 14) in place of the interface in Schondorf.

The result is to substitute some portion (what?) of Darmawaskita Fig. 3 for the C to V converter and/or impedance voltage follower (which one ? ; or both ?) in Schondorf, as Schondorf is directed to capacitive sensors.

But that is not the claimed combination, as that combination is an interface

between occupant sensor 24 and the microprocessor 44 of Schondorf, and is not connected to the buckle sensor 38.

Thus, a Darmawaskita-modified Schondorf direct sensing combination would be of the capacitance or induced current in the wires of the occupant sensor 24, which is the wires embedded in the belt itself. Those which have nothing to do with the seat belt tensioner or latch per se. The wires (28 in Figs 2 and 4 of Schondorf) do not determine if the seat belt is latched. Rather they sense, capacitively or inductively, the presence and the size of a passenger. Further, the Office has not shown that Schondorf does not already have direct interfacing such that Schondorf would not bother to consider the Darmawaskita-type non-A/D converter system.

Please note that Darmawaskita fails to mention a seat-belt latch sensor as one of the types of sensors to which his system is applied. See Col 1, lines 15 – 45 of Darmawaskita.

Further, neither reference taken alone or in combination teaches the specific method steps of the instant Claims 9 – 11. For example, they do not teach monitoring seat belt latches, an output path to a seatbelt tensioner system or monitoring the fore aft position of the seat and input to an airbag control system in the steps claimed.

While there is a “buckle sensor 38” shown in Fig. 5 of Schondorf, note that it points to an empty square. That is, the Office cannot rely on schematic drawings, and equally empty text (Col 4, lines 11 – 16 in Schondorf) to make the rejection. Applicant’s invention is directed to what is inside the empty boxes 38 and 44 of Schondorf. Note that Schondorf neither shows nor describes the circuitry in his “Micro[processor] 44”. The details are what Applicant’s invention is directed to, See Applicant’s Figure 2.

As to Applicant’s point # 3, equally important are the principles of law applicable to this case that have been completely violated by the broad brush assertions and “official notice” of the Office Action.

The fundamental principle, as articulated by the Court of Appeals for the Federal Circuit in *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984), is that the prior art must suggest the combination of references. In *Gordon*, the Court rejected the idea that the prior art devices could be modified to produce the claimed device as a proper basis for an obviousness rejection, holding the combination is not proper unless the prior art suggests the desirability of such a modification.

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In **SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.**, 8 USPQ2d 1468 (Fed. Cir. 1988), the Court held that to pick and chose elements from references to recreate the invention is not proper. And in **Northern Telecom, Inc. v. Datapoint Corp.**, 15 USPQ2d 1531 (Fed. Cir. 1990), cert. denied, 498 U.S. 920 (1990), the Court held that “[i]t is insufficient that the prior art disclosed the components of the patented device, either separately or used in other combinations; there must be some teaching, suggestion, or incentive to make the combination made by the inventor.” (Emphasis added).

These governing principles were applied by the Court in holding in error the obviousness rejections in **In re Bond**, 15 USPQ2d 1566 (Fed. Cir. 1990) and **In re Mills**, 16 USPQ2d 1430 (Fed. Cir. 1990). **In re Mills** specifically held that although the prior art device could be modified to run the way the applicant’s device was claimed to run, “there must be a suggestion or motivation in the reference to do so.” 16 USPQ2d 1430. Since there was none, the rejection was in error and was reversed. More recently, in **Sensonics, Inc. v. Aerosonic Corp.**, 38 USPQ2d 1551 (Fed. Cir. 1996), the Court reiterated this principle, holding there was no teaching or suggestion in the prior art that would have led a person skilled in the art to select the specific mechanical and electrical structures and concepts and combine them in the manner of the invention of that case.

As a further principle, both the Courts and the Board of Appeal have long held that the suggestion for the combination in the references cannot come from the Applicant’s Specification, see, for example, **Ex parte Brack**, 134 USPQ 445 (POBA 1961). The reason is simple: Applicant’s Specification is not prior art. **Applicant’s specification cannot be used as a parts-list to search for disparate parts in the art, and then used as a blueprint to assemble the selected parts.** The sources for the motive not only to select the parts, but also the direction for reassembling them into the claimed combination to obtain the desired result, must come from the references.

As seen above, those fundamental and governing principles were not followed in this Office Action. The result is that the rejections of the claims are unsound and should be withdrawn.

With respect to the Office relying on “official notice” and empty boxes in the references (e.g., Buckle Sensor 38 and Microprocessor 44 in Fig. 5 of Schondorf), consider what the law really is: The Court stated in ***In re Cofer***, 148 USPQ 268 at 271 (CCPA):

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“Necessarily it is **facts appearing in the record . . . which must support the legal conclusion of obviousness** under 35 USC 103. Merely stating that a compound or composition is obvious, without adequate factual support, is not sufficient.”

Thus, the mischaracterization of what Schondorf shows (see the Detailed Action, page 2 that relies on the empty boxes 38 and 44) and on “official notice” amounts to reliance by the Examiner on phantom prior art. The conclusory assertions throughout the Office Action that the claims are obvious are **mere statements of opinion that have no sound factual support**. It amounts to deeming the claimed invention is obvious, a reliance on phantom prior art. The Board of Patent Appeals and Interferences does not condone that approach, stating in Ex parte Stern, 13 USPQ 2d 1379 at 1381:

“The examiner should be aware that “deeming” does not discharge him from the **burden of providing the requisite factual basis** and establishing the requisite motivation to support a conclusion of obviousness. [Citing cases] The examiner’s reference to unidentified phantom prior art techniques falls far short of the mark. [Citing cases] Accordingly, the examiner’s rejection of the appealed claims under 35 USC 103 as unpatentable over any of the primary references, considered singly, is reversed.”

Clearly, the 103 rejection here should be withdrawn as lacking any factual basis. Misrepresentations and omissions of what the references really teach, and papering over admitted gaps by reliance on undocumented “official notice” are not support for the rejections. Schondorf at best shows merely incidentally a latch sensor 38 but is not directed to the interface issues, and does not point to Darmawaskita.

While Applicant has focused on the rejection of Claim 1 on pages 2 and 3 of the Office Action, the rejections of the other claims on pages 3 – 7 (“Regarding claim 2” etc, through “9, 10, 11”) are similarly flawed. Indeed, in reference to the rejection of method claims 9 – 11 (page 7 of the Office Action) it is improper to state “Reference A in view of B disclose” and then repeat the claim. The references do not combine themselves and therefore the combination does not “disclose” anything. That rejection is particularly egregious, as there is no conclusion and no logical path by which a conclusion is drawn. Rather, there is the bare assertion that they “disclose” what is parsed as the claimed method. The Board’s admonition in Ex parte Stern is a par-

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ticularly apt and conclusive response.

CONCLUSION

It is clear that the combination of references is entirely inappropriate as relying on Applicant's specification as both a parts list to pick disparate elements from the prior art references, and then a prior art to supply the motive for the combination. Since Applicant's specification is not prior art, the combination is inappropriate and should be withdrawn.

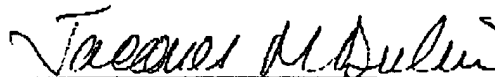
In addition, the references taken alone or in combination do not teach or suggest the claimed invention. Substituting a Darmawaskita-type direct interface in place of the C to V Converter or the impedance voltage follower 56 of Schondorf is simply not the claimed invention. Accordingly, favorable action of allowance of all the claims in the case is respectfully requested.

In the event there remain open issues, the Examiner is requested to contact Applicant's counsel at the number below.

Respectfully submitted,
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End of Section 3, Remarks.

End of Response to Office Action.